The Future of Cyber Gauges is Here and Now.

USER' S MANUAL

CYBER GAUGE
OBD or SENSOR SYSTEM

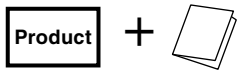
OBD Connection

BOOST **COB**
WATER TEMP **COW**
VOLTAGE **COV**
TACHOMETER **COT**

OBD UNIT **COU**

Thank you for purchasing this PIVOT product.
Please read this manual carefully and keep it for future reference.

●If this product is given to another user, make sure to include this User' s Manual.



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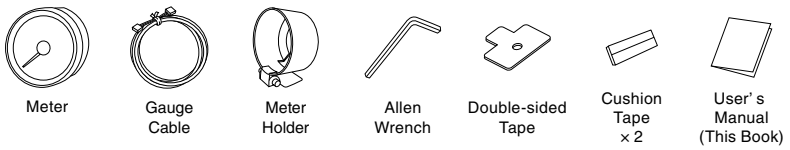
Please check the contents of the package



Meter | Gauge Cable | Meter Holder | Allen Wrench | Double-sided Tape | Cushion Tape × 2 | User' s Manual (This Book)

Need to purchase separately sold OBD unit (COU) to operate meter.

The contents of the OBD unit package

OBD Unit | OBD Cable with fuse 3A | IGN Cable with fuse 3A | Double-sided Tape | Zip Ties (Large) × 2 (Small) × 5 | Cut Connectors × 2

1. The display will not be proper if the ECU being used is not the standard one or if a sub-computer is being used, even in compatible car models.
2. Cannot be used in combination with other company's products that use Diagnostic Monitoring Connectors.
3. For details about using combinations of PIVOT OBD2 products, see here. ⇒ ***http://pivotjp.com/obd/***

⚠ WARNING

Improper use or disregard of these warnings may result in the injury or death of people.

●**Do not work in areas where there is excessive exhaust.**
Due to vehicle exhaust emission poisoning or fire may result in a damage to humans.

●**Do not crush the cable.**
Please be careful that the cable does not get crushed by the seat rail or car door steel plate, nor cut by any sharp steel plate as this may cause a poor connection or an electric short leading to fire or other danger.

●**Do not operate while driving.**
Operating or checking the display during driving may cause an accident; please use with the utmost consideration for safety.

●**Please securely fasten the product to a stable place and be sure to store bundle away all wires with tape, etc...**
It is very dangerous to pull tangled wires by force or allow tangled wires to interfere with driving.

⚠ CAUTION

Improper use or disregard of these warnings may cause injury to persons, damage the product and other things.

●**This product is for DC12V cars;**
Installation cannot be carried out on cars with other voltage batteries.

●**Just after installation do not exert any strong force on the product.**
When double-sided tape is used for an installation be warned that when hot the tape temporarily losses adhesiveness.

●**Do Not Use Chemical Cleansers.**
If the unit gets dirty please wipe with a soft cloth to remove any dirt. Do not use chemical cleansers such as thinner, benzene, or alcohol.

●**Do not install the product in any place subject to high temperature or any place where water may be splashed.**

●**Make sure to replace all screws and parts to their original place.**

●**Do not install the product in a place where it will cause distraction.**

●**Do not, in any manner, process, take apart, or make changes to this product.**

Features

Easy-to-Install OBD Connection Models
Simple Coupler Connection to Diagnostic Monitor Connector
*Please check compatible car models with the Fitting List

Low Position Holder
New meter gauge holder allows for installation at 5 mm lower than normal.

Illumination
White LED lighting of Dial and Needle.

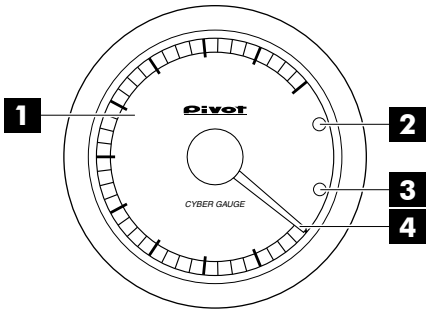
Warning and Peak reading
Blinks red LED at the set value as Warning and the Peak reading.

Stepping Drive
Our stepping motor is able to provide a smooth, highly precise display.

Linkage Possible
For a sleek one-line connection from multiple gauges to unit use our link cable (sold separately).

Part Names and Displays

【Meter】



1 Display Display each data

2 LED Blinks red LED at the set rpm and the Peak reading.

3 Switch Use to set the warning and display and reset the peak value.

4 Needle Shows the current values and peak value.

5 Illumination Normally illuminated when on display. (dial : white, needle : white)

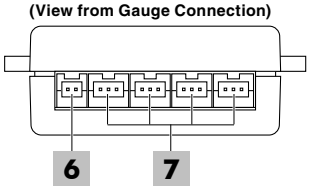
6 Spare No need to use

7 Meter connector Connect gauge cable

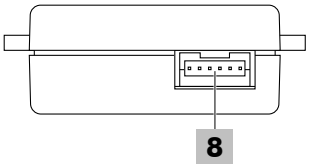
8 Power connector Connect power cable

【Unit】

(View from Gauge Connection)

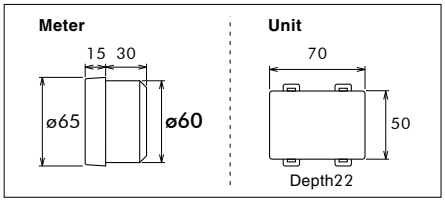


(View from Car Connection)



Product	Product Number	Display Range	Warning	Peak
BOOST	COB	-100 ～ 154kPa	Over the set value	Maximum side
WATER TEMP	COW	20 ～ 120°C	Over the set value	Maximum side
VOLTAGE	COV	7 ～ 17V	Under the set value	Lowest side
TACHOMETER	COT	0 ～ 9000rpm	Over the set value	Maximum side

Size
[Unit :mm]



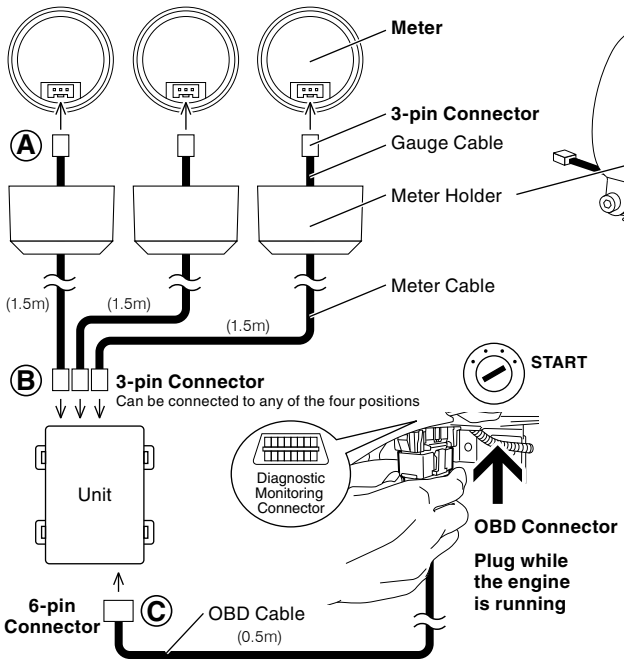
Connecting the Wires

1 Insert each connector, Ⓐ Ⓑ Ⓒ in the diagram below.

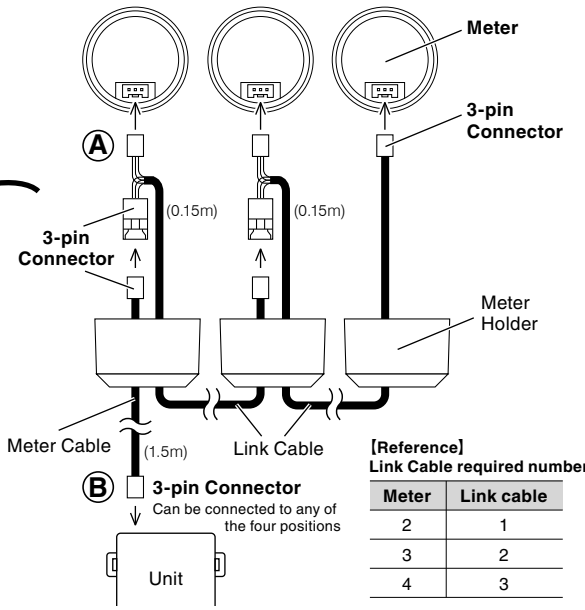
2 Engine start and insert OBD Connector to the Diagnostic Monitoring Connector of car.

※ Meter can be connected up to four in both basic and link wiring.

Basic Wiring



Link Wiring (Link Cable is separately sold)

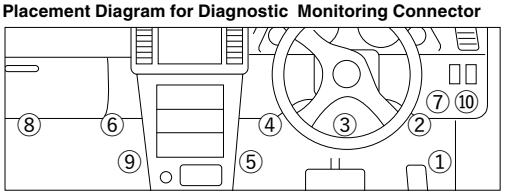


【Reference】
Link Cable required number

Meter	Link cable
2	1
3	2
4	3

Procedure for connecting OBD code is same as basic wiring.

Placement Diagram for Diagnostic Monitoring Connector

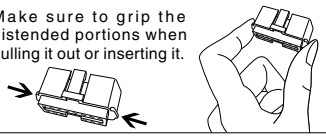


TOYOTA	①②③④⑦	MAZDA	②④⑩
NISSAN	①②③④⑤⑦	SUBARU	②③
HONDA	②④⑤⑥⑧⑨	SUZUKI	②④
MITSUBISHI	②③④⑤	DAIHATSU	②③④⑤

①By the accelerator pedal
②At the right foot of the driver seat (with lid)
③At foot of driver seat in the center
④At the left foot of the driver seat (with lid)
⑤At the right side of the center console
⑥At the right foot of the passenger seat
⑦Behind the panel by the steering (with lid)
⑧At the left foot of the passenger seat
⑨At the left side of the center console
⑩Panel to right of steering wheel (upper part of small storage box)

Notes about using the OBD2 Connector

Make sure to grip the distended portions when pulling it out or inserting it.

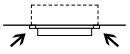


⚠ CAUTION

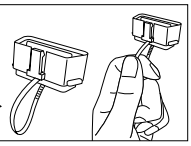
Do not pull on the wires when trying to remove the connector; the wires may become disconnected.

If you unable to get a grip on the distended portions.

With some car models it may be difficult to get a good grip on the connector.



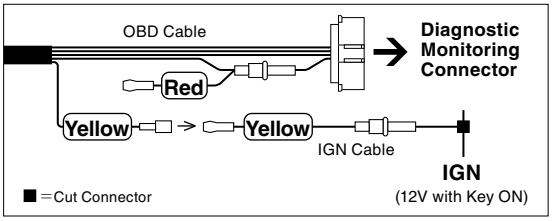
In such case, pull out the connector by pulling on the end of the zip tie.



If connect the power cable to IGN (Not normally required)

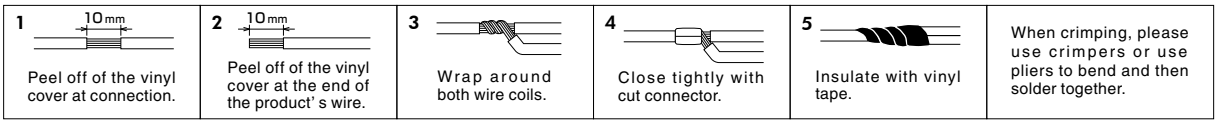
For some models, please connect the power cable to IGN as shown on the right.

	Symptom	Cause
Part of SUBARU (Including 86)	After stopping the engine, it takes about a minute until the meter turns off.	It's a communication matter with the car side, but it has no trouble to the car without changing the wiring.
Part of SUZUKI	Sometimes the meter is not working.	It's a communication matter with the car side



Unplug the connector of Yellow and Red cable of OBD Cable and connect Yellow cable of IGN Cable into the connector on yellow cable, then connect to IGN cable to IGN of car. (Do not connect to Acc)

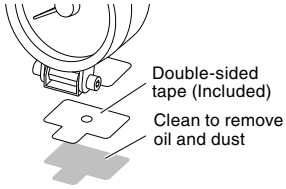
How to use the Cut Connectors


1
10mm
Peel off of the vinyl cover at connection.
2
10mm
Peel off of the vinyl cover at the end of the product' s wire.
3
Wrap around both wire coils.
4
Close tightly with cut connector.
5
Insulate with vinyl tape.
When crimping, please use crimpers or use pliers to bend and then solder together.

Installing The Product

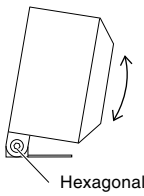
Installing The Meter (Installation with the Meter Holder)

① Fasten using the double-sided tape. (Clean the surface; removing all oil and dust.)

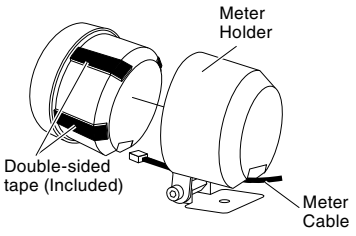


*Please be sure about where you wish to install the meter, as it is not advisable to reuse double-sided tape.

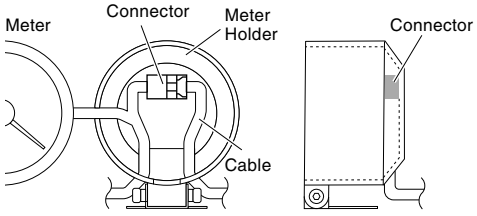
② After deciding the position and angle of the meter face, fasten the Hexagonal bolt on both sides to secure.



③ Affix Cushion tape on 2 to 4 places to the base of the meter and install the gauge into the Meter Holder.

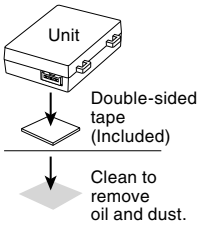


●When using Link Cable, put the connector to the back of Meter Holder as shown in the below diagram. Push the remained cable between the meters to inside of Meter Holder.

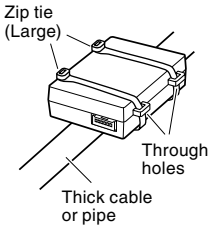


Installing The Unit

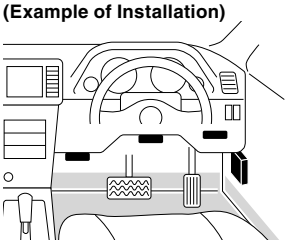
Fastening to Flat Space



When Fastenings to a Cable or Pipe

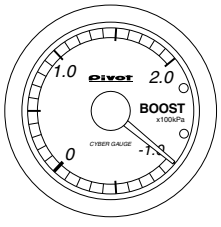


(Example of Installation)



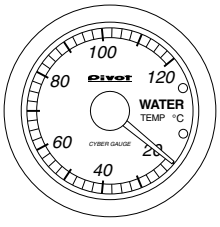
As shown in the above diagram , fasten the unit into positions not usually affected by water.

Features of the meter



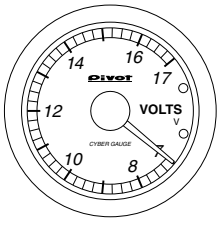
BOOST **A Must-Have for Turbo Cars**

From checking boost to estimating gas usage (vacuum side) make this a vital item for your turbo engine car.



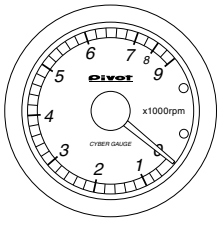
WATER TEMP **For Preventing Overheating and Checking Warm-up**

This gauge allows you to not only check warm-up operation but help prevent overheating due to lack of coolant or trouble in the coolant line.



VOLTAGE **Battery Checking for New-Era Systems**

Use to calculate battery life by checking voltage drop during idling and minimum voltage at start up, as well as, check on your battery recharging status from regenerative braking.



TACHOMETER **From Sports to Eco Driving**

A basic tachometer designed for checking shifting performance in both AT and MT cars, as well as, help optimize your eco-driving.

Basic Operation

1 **Key Switch ON** (Engine start)

2 **Opening Demo**

3 **Real-time display**

4 **Key Switch OFF** (Engine stop)

5 **Meter OFF**

Opening Demo

●The needle will move to the lowest value side several times for searching position. Then it will move to the maximum value and finally to reading for current measurement item.

Switching The Display and Setting

Peak reading display

1 **Press the switch once**

While the meter is in operation, press the switch once.

2 **Peak reading display**

LED will light.

3 **Real-time display**

Back to real-time display after 3 seconds releasing the switch.

Reset the Peak reading

1 **Press the switch for 3 seconds**

Pressing the switch while displaying the peak reading will re-set the peak reading.

4 **Reset the Peak reading**

LED will light off.

5 **Real-time display**

Measuring the lowest voltage by voltmeter

1 ON or ENGINE START STOP

Without braking, press down twice

Turn the key switch ON and display the meter

2 START or ENGINE START STOP

With braking, press down once

Start the engine and check the lowest voltage with Peak reading display

●Recommend to charge or replace the battery if it's lower about 1V or more than when new.

※Each peak value can be reset by the key OFF.

Setting of Warning

※Can't make setting of Warning while displaying Peak reading(LED lighting).

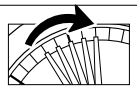
1 **Press the switch for 3 seconds**

While the meter is in operation, press the switch for 3 seconds.

2 **Setting warning point display**

LED will brink.

3 **Press the switch**



Each pressing of the switch will raise, at the maximum point it will return to the minimum point.

While holding down the switch, change the warning setting.

※By continually pressing down on the switch the needle will move to the maximum point.

4 **Release the switch**

5 **Real-time display**

LED will light off and back to real-time display after 3 seconds releasing the switch.

Troubleshooting

Trouble	Possible Causes	Possible Solutions
Does not work with Engine start.	Poor connection of **Gauge cable**, **Link cable**, **6-pin Connector**, **OBD Connector** and **IGN cable**.	Please reconfirm whether wiring and connections are correct or not.
	The unit has been installed into an incompatible car model.	Please check the "Fitting List".
	OBD Connector was connected when the key switch was set to OFF, or car battery was changed.	Connect again **OBD Connector** when the key switch is set to ON (engine start).
Needle of the boost gauge is shifted to slightly negative from 0 when the key switch ON and the engine is stopped.	**Depending on the altitude, needle shifts about one scale by the characteristics of car side sensor(absolute pressure), but this is not a malfunction.**	

※Our products have already been recognized as our Industrial Property or are in the process of receiving Industrial Property status.
※We plan in the near future to take all possible legal measures to protect against unfair competition from look-alike products using similar designs, regulating characteristics, circuitry and circuitry layout.
※We strictly prohibit the unlicensed use of the PIVOT trademark and the unauthorized use of PIVOT User' s Manual.